Amendments to the Claims:

Please amend claims 1, 5, 11, 14 and 20 as follows:

1. (Currently Amended) A device for measuring the contrast of fringes in a full-field Michelson interferometer having at least means for separating a source beam into one reference arm and one measurement arm, the reference arm and the measurement arm co-operating with an output arm, which receives a reference signal and a measurement signal from the separating means, in order to produce an optical coherence tomography (OCT) system, said device comprising:

~~means for separating a beam entering into the output arm,~~

means for deflecting two incoming signals issued from the reference arm and the measurement arm of the Michelson interferometer having perpendicular polarizations in at least two different emerging directions and a beam detector, said means for deflecting being arranged between ~~said~~ the means for separating and said beam detector within the output arm of the full-field Michelson interferometer ~~as a substitution for a single polarizer~~

said means for deflecting (W) being oriented so that at least two interferometric images of an observed point are formed through an interference of projection of the reference signal and the measurement signal on an axis of said means for deflecting and respectively an interference of projection of the reference signal and the measurement signal on another axis of said means for deflecting (W).

2. (Previously Presented) The device according to claim 1, wherein the means for deflection comprise a Wollaston prism.

3. (Previously Presented) The device according to claim 2, wherein it is arranged to carry out measurements for path differences differing by $\lambda/2$ or $\lambda/4$.

4. (Previously Presented) The device according to claim 3, wherein it is arranged to obtain at least two measurements, strictly simultaneous and in phase opposition.

5. (Currently Amended) The device according to claim 2, wherein it is arranged to carry out four measurements, and <u>further means for separating a beam comprising a reference signal and a measurement signal, entering into the detection output arm into at least two separate sub-beams,</u> ~~in that it also comprises~~ means of generating, in one of ~~said separated~~ <u>said two sub-</u>beams, an additional delay of $\lambda/4$ between the polarizations originating from the measurement arm and the reference arm of the interferometer, and means for reintroducing together the two beams thus processed into the Wollaston prism such that, on output from the latter, there are then four light beams<u> forming four interferometric images of the field</u>.

6. (Previously Presented) The device according to claim 1, wherein the separator means comprise a single non-polarizing separator plate.

7. (Previously Presented) The device according to claim 5, wherein the delaying means comprise a quarter-wave plate.

8. (Previously Presented) The device according to claim 5, wherein the Wollaston prism is arranged in a pupil plane.

9. (Previously Presented) The device according to claim 5, wherein it also comprises means for arbitrarily orienting the polarizations of four incident beams relative to the Wollaston prism's own axes.

10. (Previously Presented) The device according to claim 9, wherein the means for orienting comprise a half-wave plate preceding the Wollaston prism.

11. (Currently Amended) A method for measuring the contrast of fringes in a full-field Michelson interferometer including at least one reference arm and one measurement arm co-operating with an output arm, which receives a reference signal and a measurement signal from a means for separating a source beam, to produce an optical coherence tomography system, the method comprising the steps of:

~~separating a beam~~ introducing a reference beam and a measurement beam ~~entering~~ into the output arm from a further ~~using a~~ beam splitter and deflecting two incoming beams issued from the reference arm and the measurement arm of the Michelson interferometer having

perpendicular polarizations in at least two different emerging directions producing at least two interferometric images by means of a Wollaston prism situated between said beam splitter and a beam detector in said output arm of the full-field Michelson interferometer through an interference of projection of said reference beam and said measurement beam on an axis of the Wollaston prism and respectively an interference of projection of said reference beam and said measurement beam on another axis of the Wollaston prism.

12. (Previously Presented) The method according to claim 11, further including measurements for path differences differing by $\lambda/2$ or $\lambda/4$.

13. (Previously Presented) The method according to claim 12, further including at least two measurements, strictly simultaneous and in phase opposition.

14. (Currently Amended) The method according to claim 11, further including four measurements, a separation into two sub-beams of a beam comprising a reference signal and a measurement signal entering the output arm, a generation, in one of the two separated sub-beams produced, of an additional delay of $\lambda/4$ between the polarizations originating from the measurement arm and the reference arm of the interferometer, and a reintroduction of the two sub-beams thus processed into the Wollaston prism such that, on output from the latter, there are then four light beams forming four interferometric images of the field.

15. (Previously Presented) The method according to claim 14, further including an arbitrary orientation of the polarizations of the four incident beams relative to the Wollaston prism's own axes.

16. (Previously Presented) The method according to claim 15, wherein the measurements on the four beams are carried out simultaneously.

17. (Previously Presented) The method according to claim 11, further including, in the measurement arm, a compensation for the effects of focal chromatism of the eye.

18. (Previously Presented) The method according to claim 11, further including, in the reference arm, means for compensating for the dispersion of the path differences.

19. (Previously Presented) The method according to claim 11, further including a control of a wave front analyzer obliging it to work in defocused mode.

20. (Currently amended) A system for examining the eye by *in vivo* tomography, comprising:

a Michelson interferometer, comprising at least means for separating a source beam into one measurement arm and one reference arm co-operating with an output arm which receives a reference beam and a measurement beam from said means for separating in order to produce a full-field OCT setup,

-adaptive optical means, arranged between the measurement arm of the interferometer and an eye to be examined or within said measurement arm, carrying out the correction of the wavefronts originating from the eye as well as those reaching the eye,

~~means for separating a beam entering into the output arm using a beam splitter;~~

-means of detection, arranged downstream of the interferometer or within its output arm, making it possible to carry out the interferometric measurement according to the optical coherence tomography (OCT) principle, and

a device for measuring the contrast of fringes in a full-field Michelson interferometer, said device comprising in the output arm, means for deflecting two incoming signals issued from said reference arm and said measurement arm of the Michelson interferometer polarizations in at least two different emerging directions, said means for deflecting being positioned between said means for separating and said means of detection in said output arm, said means for deflecting being oriented so that at least two interferometric images of an observed point are formed through an interference of projection of said reference signal and said measurement signal on an axis of said means for deflecting and respectively an

interference of projection of said reference signal and said measurement signal on another axis of said means for deflecting.

21. (Previously Presented) The system for examining the eye according to claim 20, further including a sighting device comprising at least one moving target having a programmable shape and trajectory, said target being displayed on an appropriate screen, visible by both eyes, during the examination period.

22. (Previously Presented) The system according to claim 20, wherein the reference source is inserted into the optical path between the adaptive optical means and the eye to be examined.

23. (Previously Presented) The system according to claim 20, further including, in the measurement arm, means for compensating for the effects of focal chromatism of the eye.

24. (Previously Presented) The system according to claim 20, further including, in the reference arm, means for compensating for the dispersion of the path differences.